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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/598,802

Applicant(s)

GUTHRIE, BRIAN J.

Examiner

MITRA SHAMOULIAN

Art Unit

4192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/12/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 5/14/2007
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Objections

Claims 1-24 are objected to because of the following informalities:

It is unclear whether letters and numbers within the parentheses are limitations or NOT limitations in the claims. As such, all the letters and numbers between the parentheses should be removed/deleted from the claims. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-5, 7-8, 11-20 and 22-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Caliskan et al. (Patent US 7,436,789).

Claim1, Caliskan discloses a communication device (F) (Fig.1 ,el. 10; Page 3, Lines 43-6 ;Fig. 5) for transmitting data to and receiving data(Fig.11A, el. 551, 575, 530;Page 23, lines 25-33; lines 64-66) from one or more other communication devices

(A, B, C, D, E) via a network (1) (Fig. 5, piconets network with one Master and seven slave; Page 11, Lines 64- 67; Multiple nodes, Page 4, line 64 through Page 5, line 1), wherein the communication device is arranged to respond to address information (Address Resolution Protocol, Col.10, Lines 5-26; Detecting New Neighbors, Col.10, Lines 36-51; Fig.5B, el. 315 ;320 ,330 ; Col.12, Lines 42- 49)(26) broadcast by a second communication device (G) (Broadcast Transmissions Col.9, Line 55 through Col.10 line 3; Broadcast "Hello ID" Fig. 5B, el. 310; Col. 9, line 55 though Col. 10, line 4) joining said network by determining whether a message (27) containing address information relating (establish communication protocol, Col.12, Lines 35-38 ; Broadcast Transmissions, Col. 9, Line 56 through Col.10, line 3; Message Interface, Col.10, Line 52 through Col.11, Line 5) to said one or more other communication devices (Neighbor node, Col.12, Lines 35-38) has previously been forwarded from the communication device to any other of said one or more other communication devices (Topological Changes-Detecting New Neighbors and updates its table, Col.10, Lines 36-51) and, if not, sending said message to the second communication device (Col.12, Lines 46-49).

Claim 2, Caliskan discloses a communication device (G)(Fig.11A, el.510; Col.22, Lines 476-64) comprising:

means for transmitting data (Fig.10, el. 532) (2, 3) over a network (1) (Fig. 5, piconets network with one Master and seven slave; 64- 67; Multiple nodes, Col. 4, line 64 through Page 5, line 1); and

means for receiving data (Fig.10, el. 532) (2, 3) via the network; (Fig. 5, piconets network with one Master and seven slave; Page 11, Lines 64- 67; Multiple nodes, Page 4, line 64 through Page 5, line 1);

configured to respond to a detection of activity (23) (Fig.11B, el. 605, 610 , 615, 620; Col. 23, Lines 34-45; Fig. 5B ,el. 305 ; Col. 12, Lines 30-35) on the network by:

broadcasting address information (26) of the communication device to one or more other communication devices(Fig. 11B, el. 630, 640 ; Fig . 5B, 310, Col. 12 , Lines 35-38; Col.9, Line5 through Col. 10, line 3); and

receiving a message (27) sent from one of said other communication devices("if a neighbor node hearing", Col.12, Lines 42-46), the message comprising address information relating to said one or more other communication devices and extracting said address information there from (update the table, Col.10, Lines 36-51; Messaging Interface , Col. 10, Line 52 through Col.11, Line 4).

Claim 3, Caliskan discloses a communication device (G) according to claim 2, configured to respond (Detecting New Neighbors, Col. 10, Lines 36-51; hear the hello message, Col. 12 Lines 39-45) to the broadcast of address information (26) from a further communication device (H) (Broadcast Transmissions Col.9, Line 55 through Col.10 line 4; Broadcast "Hello ID" Fig. 5B, el. 310; Col. 9, line 55 though Col. 10, line 4) ; hello message, Col. 12, Lines 35-42) by determining whether a message (27) containing address information relating to said one or more communication devices (A, B, C, D, E, F) has been sent by the communication device to another communication

device previously (Topological Changes-Detecting New Neighbors and updates its table, Col.10, Lines 36-51) and, if not, sending said message to said further communication device (Col.12, Lines 46-49).

Claim 4, Caliskan discloses a communication device (G) according to claim 2 , configured to broadcast address information (26) to said one or more other communication devices (A-F) if no network activity is detected (Col.23 ,Lines 10-33).

Claim 5, Caliskan discloses a communication device (G) according to claim 4, arranged so that, if no message (27) is received in response to the broadcast of address information (26), the address information is rebroadcast periodically(Col.23 ,Lines 58-63; Lines 39-45).

Claim 7, Caliskan discloses a communication device (F, G) according to claim 1, operable in a first mode, in which a receiver (3) within said receiving means (2, 3) is inactive(sleep mode , Col. 23, Line 34-40; Fig.11B ,el. 605), and in a second mode(monitoring, Col. 23, Line 66; Fig.11B ,el. 615,), in which the receiver is activated in order to receive data from said one or more other communication devices (A, B, C, D, E) and arranged to switch from the operating in the first mode to operating in the second mode in response to a detection of activity (23) (Col. 23 Lines 5-23; Fig. 11A; Fig. 11B) on the network (1).

Claim 8, Caliskan discloses a communication device (F, G) according to claim 7, configured to respond to said detection of activity (23) on the network (1) by determining if said activity comprises one of a wakeup signal addressed to the communication device or a broadcast wakeup signal and, if so, continuing to operate in said second mode to receive a further message (24, 26) (Col. 23, Lines 34-45; Fig. 11B, el. 600).

Claim 11, Caliskan discloses a communication device (F, G) claim 1, configured for use in a Bluetooth network (Col.3, Lines 58-60).

Claim 12, Caliskan discloses a communication device (G) according to claim 1, further comprising a sensor (6) (Fig. 11A, el. 561; Col. 23, Line 41 ; Fig.15, get current sensor data) and means (4) for generating (Fig. 10, el. 512) and transmitting data (Fig. 10, el. 530, 532; Col22, lines 47-64) based on the output of the sensor via the network (1) (Fig.4, el. 10S , 122, 124, 126; sensor data flow Col.11, Lines 25-40).

Claim 13, Caliskan discloses a communication device (G) according to claim 12, wherein said sensor (6) is arranged to monitor one or more environmental conditions(Fig.4, el. 10S , 122, 124, 126; sensor data flow Col.11, Lines 25-40).

Claim 14, Caliskan discloses a monitoring system comprising a plurality of communication devices (G) according to claim 12 (Sensor Data Flow, Col. 11, Lines 25-40; Fig.4, el. 10S , 122, 124, 126).

Claim 15, Caliskan discloses a communication system comprising a network (1) and a plurality of communication devices (F, G) according to claim 1 (first node, Fig. 1, el. 10; Page 3, Lines 43-6 ;Fig. 5; second node, Fig. 11A, el. 510; Col. 22, Lines 476-64).

Claim 16, Caliskan discloses a method of disseminating address information from a communication device (F) connected to a network (1), comprising:

receiving broadcast address information (26) ("if a neighbor node hearing", Col. 12, Lines 42-46) from a second communication device (G); and,
in response to said message, determining whether a message

(27) containing address information relating to one or more other communication devices (A, B, C, D, E) connected to the network has previously been forwarded from the communication device to any other of said one or more other communication devices (update the table, Col. 10, Lines 36-51; Messaging Interface , Col. 10, Line 52 through Col. 11, Line 4) and, if not, sending said message to said second communication device (Col. 9, Lines 23-34; Col. 12, Lines 46-49).

Claim 17, Caliskan discloses a method for connecting a communication device (G) (connection oriented radio, Col. 10, Lines 21-35) to a network (1) (Fig. 5, piconets network with one Master and seven slave; Page 11, Lines 64- 67; Multiple nodes, Page 4, line 64 through Page 5, line 1) , comprising:

detecting activity (23) on the network (Fig.5b, el.305, 310; Col.23, Lines 34-44)
and

in the event of an activity being detected, broadcasting address information (26) (Broadcast Transmissions Col.9, Line 55 through Col.10 line 3; Broadcast "Hello ID" Fig. 5B, el. 310; Col. 9, line 55 though Col. 10, line 4) of said communication device to one or more other communication devices (A, B, C, D, E, F) connected to the network (Fig. 5, piconets network with one Master and seven slave; Page 11, Lines 64- 67; Multiple nodes, Page 4, line 64 through Page 5, line 1), receiving a message (27) from one of said communication devices comprising address information relating to said one or more communication devices and extracting said address information therefrom (Topological Changes-Detecting New Neighbors and updates its table, Col.10, Lines 36-51).

Claim 18, Caliskan discloses a method according to claim 17, comprising:

in response to broadcast of address information from a further communication device (H) (Broadcast Transmissions Col.9, Line 55 through Col.10 line 3; Broadcast "Hello ID" Fig. 5B, el. 310; Col. 9, line 55 though Col. 10, line 4) , determining whether a second message (27) containing information relating to said one or more communication devices (A, B, C, D, E, F) has been forwarded by the communication device (G) to any other communication device (Topological Changes-Detecting New Neighbors and updates its table, Col.10, Lines 36-51) and, if not, sending the second

message to said further communication device (Col. 9, Lines 23-34; Col.12, Lines 46-49).

Claim 19, Caliskan discloses a method according to claim 17, comprising, if no network activity (23) is detected, broadcasting the address information (26) to said one or more other communication devices (A-F) (rebroadcast, Col. 23, Lines 40-45; Fig.11B, el. 605, 610, 615).

Claim 20, Caliskan discloses a method according to claim 19, comprising, if no message (27) is received following the broadcast of address information (26), rebroadcasting the address information periodically (Col.23, 34-45; Fig.11B, el. 605, 610, 615).

Claim 22, Caliskan discloses a method according to claim 16, comprising:
operating the communication device (F, G) in a first mode, in which a receiver (2) within the communication device is inactive (non-active, Col.23, line 11, sleep mode , Fig.11B, el. 605; Col.23, line 40); and

switching to operating the communication device in a second mode (Fig.11B, el. 615, 620, active mode , Col.23, lines 45-47), in which the receiver is activated in order to receive data from said one or more other communication devices (A, B, C, D, E) in response to a detection of activity (23) on the network (1) (Fig.11B, el. 615, 620, active

mode , Col.23, lines 45-47).

Claim 23, Caliskan discloses a method according to claim 22, comprising, in response to detection of activity (23) (Fig. 11B, el 615, Col. 23, Lines 41-43) on the network (1), determining whether said activity comprises one of a wakeup signal addressed to the communication device (F, G) or a broadcast wakeup signal (Fig. 5B, el. 310,) and, in response to a positive determination, (Fig. 5B, el. 315, Col. 12, Lines 38-42) continuing to operate in said second mode to receive a further message (24, 26).

Claim 24, Caliskan discloses a method according to claim 16, further comprising receiving output from a sensor (6) and generating and transmitting via the network (1) data based on said output (Fig.4, el. 122, 124, 126; Fig .10, el. 512, 530, 532; Sensor Data Flow, Col.11, Lines 26-41).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caliskan et al. (Patent US 7,436,789) in view of Haartsen patent US (6,804,542)

Claim 6, Caliskan discloses a communication device (G) according to claim 5, Caliskan does not disclose arranged to increase a period between successive broadcasts of the address information (26).

Haartsen discloses arranged to increase a period between successive broadcasts of the address information (26)(Col. 8 lines 24-32 of Haartsen).

Therefore it would have been obvious to one of skill in the art at the time of the invention was made, to modify Caliskan by adding increase the scan period time, as taught by Haartsen, in order to reduce the power consumption in mobile terminals during pauses between data bursts. When there is no traffic on the channel for a predetermined amount of time, the units enter a low duty cycle sleep mode in which they sleep most of the time and wake up periodically, with a period T, to scan the channel for a brief time. The scan periods are offset from an absolute time reference to prevent more than one unit transmitting at the same time (Abstract, Lines 5-7; summary Col.3, Lines 11-35 ; Abstract, Lines 5-7 of Haartsen).

Claim 21, Caliskan discloses a method according to claim 20, comprising

Caliskan does not disclose increasing a period between successive broadcasts of the address information (26).

Haartsen discloses increasing a period between successive broadcasts of the address information (26) (Col. 8 lines 24-32 of Haartsen).

Therefore it would have been obvious to one of skill in the art at the time of the invention was made, to modify Caliskan by adding increase the scan period time, as taught by Haartsen, in order to reduce the power consumption in mobile terminals during pauses between data bursts. When there is no traffic on the channel for a predetermined amount of time, the units enter a low duty cycle sleep mode in which they sleep most of the time and wake up periodically, with a period T, to scan the channel for a brief time. The scan periods are offset from an absolute time reference to prevent more than one unit transmitting at the same time (Abstract, Lines 5-7; summary Col.3, Lines 11-35; Abstract, Lines 5-7 of Haartsen).

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Caliskan et al. (Patent US 7,436,789) in view of Siegemund (Rendezvous layer protocols for Bluetooth-enabled smart devices; Pers Ubiquit Comput (2003) 7:91-101 DOI 10.1007/s00779-003-0233-z , Received : 14 January 2003/ Accepted: 19 February 2003)

Claim 9, Caliskan discloses a communication device (F, G) according claim 1, Caliskan does not disclose configured for use in a ubiquitous radio network (1).

Siegemund discloses configured for use in a ubiquitous radio network (1) (Page 91, introduction, line 1 of Siegemund).

Therefore it would have been obvious to one of skill in the art at the time of the invention was made, to modify Caliskan by adding ubiquitous network, as taught by Siegemund, in order to optimize discovery performance, in large number of device and save energy (Page 97, section 6, Lines 14-21 of Siegemund).

4. Claim 10, is rejected under 35 U.S.C. 103(a) as being unpatentable over Caliskan et al. (Patent US 7,436,789) in view of Lee patent US (7,398,327)

Claim 10, Caliskan discloses a communication device (F, G) according to claim 1,

Caliskan does not disclose configured for use in a ZigBee network.

Lee discloses configured for use in a ZigBee network (Col4 Lines 5-9 of Lee).

Therefore it would have been obvious to one of skill in the art at the time of the invention was made, to modify Caliskan by adding ZigBee network, as taught by Lee, in order to provide only limited coverage. Hence, mobile application may be required to work in a not – always –on environment, using a network only when it's available (Col.2, Lines 4-8 of Lee).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MITRA SHAMOULIAN whose telephone number is (571)270-7912. The examiner can normally be reached on Monday to Thursday 7:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hai Train can be reached on (571)272-7305. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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1/29/2009
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Supervisory Patent Examiner, Art Unit 4192